



National Nutrient Database for Standard Reference  
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## Statistics Report 20009, Buckwheat groats, roasted, dry

Report Date: June 27, 2017 02:57 EDT

Nutrient values and weights are for edible portion.

Nutrient	Unit	Value Per 100 g	Data Points	Std. Error	Min	Max	df	LB	UB	# Studies	Source	NDB Ref	Last Modified
<b>Proximates</b>													
Water	g	8.41	--	0.569	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Energy	kcal	346	--	--	--	--	--	--	--	--	Calculated or imputed	--	10/1989
Energy	kJ	1448	--	--	--	--	--	--	--	--	Calculated or imputed	--	12/2006
Protein	g	11.73	--	1.464	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Total lipid (fat)	g	2.71	--	0.555	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Ash	g	2.20	--	0.460	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Carbohydrate, by difference	g	74.95	--	--	--	--	--	--	--	--	Calculated or imputed	--	10/1989
Fiber, total dietary	g	10.3	--	--	--	--	--	--	--	--	Calculated or imputed	--	04/1994
<b>Minerals</b>													
Calcium, Ca	mg	17	--	1.271	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Iron, Fe	mg	2.47	--	0.605	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Magnesium, Mg	mg	221	--	39.768	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989

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Phosphorus, P	mg	319	--	114.955	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Potassium, K	mg	320	--	103.806	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Sodium, Na	mg	11	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Zinc, Zn	mg	2.42	--	0.326	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Copper, Cu	mg	0.624	--	0.074	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Manganese, Mn	mg	1.618	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Selenium, Se	µg	8.4	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	12/1997
<b>Vitamins</b>													
Vitamin C, total ascorbic acid	mg	0.0	--	--	--	--	--	--	--	--	Calculated or imputed	--	10/1989
Thiamin	mg	0.224	--	0.110	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Riboflavin	mg	0.271	--	0.076	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Niacin	mg	5.135	--	0.911	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Pantothenic acid	mg	1.233	--	0.145	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Vitamin B-6	mg	0.353	--	0.105	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989

Nutrient	Unit	Value Per 100 g	Data Points	Std. Error	Min	Max	df	LB	UB	# Studies	Source	NDB Ref	Last Modified
Folate, total	µg	42	--	4.005	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Folic acid	µg	0	--	--	--	--	--	--	--	--	Assumed zero	--	01/2001
Folate, food	µg	42	--	4.005	--	--	--	--	--	--	Analytical or derived from analytical	--	12/2006
Folate, DFE	µg	42	--	--	--	--	--	--	--	--	Calculated or imputed	--	12/2006
Choline, total <sup>1</sup>	mg	54.2	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	12/2006
Betaine <sup>1</sup>	mg	2.6	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	12/2006
Vitamin B-12	µg	0.00	--	--	--	--	--	--	--	--	Assumed zero	--	10/1989
Vitamin A, RAE	µg	0	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	12/2006
Retinol	µg	0	--	--	--	--	--	--	--	--	Assumed zero	--	06/2002
Vitamin A, IU	IU	0	--	--	--	--	--	--	--	--	Calculated or imputed	--	10/1989
Vitamin D (D2 + D3)	µg	0.0	--	--	--	--	--	--	--	--	Assumed zero	--	11/2008
Vitamin D	IU	0	--	--	--	--	--	--	--	--	Assumed zero	--	02/2009
<b>Lipids</b>													
Fatty acids, total saturated	g	0.591	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
4:0	g	0.000	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	04/1994
6:0	g	0.000	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	04/1994

Nutrient	Unit	Value Per 100 g	Data Points	Std. Error	Min	Max	df	LB	UB	# Studies	Source	NDB Ref	Last Modified
8:0	g	0.028	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
10:0	g	0.014	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
12:0	g	0.008	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
14:0	g	0.020	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
16:0	g	0.359	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
18:0	g	0.038	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Fatty acids, total monounsaturated	g	0.828	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
16:1 undifferentiated	g	0.018	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
18:1 undifferentiated	g	0.788	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
20:1	g	0.000	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	04/1994
22:1 undifferentiated	g	0.009	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Fatty acids, total polyunsaturated	g	0.828	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
18:2 undifferentiated	g	0.766	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989

Nutrient	Unit	Value Per100 g	Data Points	Std. Error	Min	Max	df	LB	UB	# Studies	Source	NDB Ref	Last Modified
18:3 undifferentiated	g	0.062	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
18:4	g	0.000	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	04/1994
20:4 undifferentiated	g	0.000	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	04/1994
20:5 n-3 (EPA)	g	0.000	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	04/1994
22:5 n-3 (DPA)	g	0.000	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	04/1994
22:6 n-3 (DHA)	g	0.000	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	04/1994
Cholesterol	mg	0	--	--	--	--	--	--	--	--	Assumed zero	--	10/1989
<b>Amino Acids</b>													
Tryptophan	g	0.170	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Threonine	g	0.448	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Isoleucine	g	0.441	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Leucine	g	0.736	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Lysine	g	0.595	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Methionine	g	0.153	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989

Nutrient	Unit	Value Per 100 g	Data Points	Std. Error	Min	Max	df	LB	UB	# Studies	Source	NDB Ref	Last Modified
Cystine	g	0.202	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Phenylalanine	g	0.461	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Tyrosine	g	0.213	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Valine	g	0.600	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Arginine	g	0.869	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Histidine	g	0.273	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Alanine	g	0.662	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Aspartic acid	g	1.003	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Glutamic acid	g	1.811	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Glycine	g	0.912	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Proline	g	0.449	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
Serine	g	0.606	--	--	--	--	--	--	--	--	Analytical or derived from analytical	--	10/1989
<b>Other</b>													
Alcohol, ethyl	g	0.0	--	--	--	--	--	--	--	--	Assumed zero	--	04/1994

Nutrient	Unit	Value Per100 g	Data Points	Std. Error	Min	Max	df	LB	UB	# Studies	Source	NDB Ref	Last Modified
<b>Flavonoids</b>													
Flavones													
Apigenin <sup>2</sup>	mg	0.3	--	0.09	0.16	0.65	--	--	--	--	--	--	--
Flavonols													
Quercetin <sup>2 3 4</sup>	mg	7.1	--	0.81	2.14	11.49	--	--	--	--	--	--	--

**Sources of Data**

<sup>1</sup>Nutrient Data Laboratory, ARS, USDA Choline Study, Local pickup VPI, NFNAP, 2006 Beltsville MD

<sup>2</sup>Dietrych-Szostak, D., and Oleszek, W. Effect of processing on the flavonoid content in buckwheat (*Fagopyrum esculentum* Möench) grain., 1999 J. Agric. Food Chem. 47 pp.4384-4387

<sup>3</sup>Kreft, I., Fabjan,N., and Yasumoto, K. Rutin content in buckwheat (*Fagopyrum esculentum* Moench) food materials and products, 2006 Food Chemistry 98 pp.508-512

<sup>4</sup>Steadman, K. J., Burgoon, M.S., Lewis, B.A., Edwardson, S., and Obendorf, R.L. Minerals, phytic acid, tannin and rutin in buckwheat seed milling fractions., 2001 J. Sci. Food Agric. 81 pp.1094-1100